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<!--StartFragment-->RESULT 4
ADS23079
ID   ADS23079 standard; protein; 554 AA.
XX
AC   ADS23079;
XX
DT   15-JUN-2007 (revised)
DT   02-DEC-2004 (first entry)
XX
DE   Bacterial polypeptide #12112.
XX
KW   Recombinant DNA construct; transformed plant; improved plant property;
KW   cold tolerance; heat tolerance; drought tolerance; herbicide; osmosis;
KW   pathogen tolerance; pest tolerance; plant disease resistance;
KW   cell cycle pathway modification; plant growth regulator;
KW   homologous recombination; seed oil yield; protein yield; carbohydrate;
KW   nitrogen; phosphorus; photosynthesis; lignin; galactomannan;
KW   bacterial polypeptide; BOND_PC; alpha-glucosidase;
KW   alpha-glucosidase [Mesorhizobium loti MAFF303099].
XX
OS   Bacteria.
XX
PN   US2003233675-A1.
XX
PD   18-DEC-2003.
XX
PF   20-FEB-2003; 2003US-00369493.
XX
PR   21-FEB-2002; 2002US-0360039P.
XX
PA   (CAOY/) CAO Y.
PA   (HINK/) HINKLE G J.
PA   (SLAT/) SLATER S C.
PA   (CHEN/) CHEN X.
PA   (GOLD/) GOLDMAN B S.
XX
PI   Cao Y, Hinkle GJ, Slater SC, Chen X, Goldman BS;
XX
DR   WPI; 2004-061375/06.
DR   PC:NCBI; gil3474261.
XX
PT   New recombinant DNA construct comprising a promoter positioned to provide
PT   for expression of a polynucleotide encoding a polypeptide from a
PT   microbial source, useful for producing plants with improved properties.
XX
PS   Claim 1; SEQ ID NO 12112; 122pp; English.
XX
CC   The invention relates to a recombinant DNA construct comprising a
CC   promoter functional in a plant cell, where the promoter is positioned to
CC   provide for expression of a polynucleotide encoding a polypeptide from a
CC   microbial source. The invention also relates to a transformed plant
CC   comprising the recombinant DNA construct and a method of producing a
CC   transformed plant having an improved property. The plant is a crop plant
CC   such as maize or soybean. The method of producing a transformed plant
CC   having an improved property comprises transforming a plant with the
CC   recombinant DNA construct and growing the transformed plant, where the
CC   polynucleotide or polypeptide is useful for improving plant properties.
CC   The recombinant DNA construct is useful for producing plants with
CC   improved plant properties, e.g. improved cold, heat or drought tolerance,
CC   tolerance to herbicides, extreme osmotic conditions, pathogens or pests,
CC   increased resistance to plant disease, better growth rate by modification

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CC of the cell cycle pathway with plant growth regulators, increased rate of
 CC homologous recombination, modified seed oil or protein yield and/or
 CC content, improved yield by modification of carbohydrate, nitrogen or
 CC phosphorus use and/or uptake, by modification of photosynthesis or by
 CC providing improved plant growth and development under at least one stress
 CC condition, improved lignin production or improved galactomannan
 CC production. This sequence represents a bacterial polypeptide used in the
 CC scope of the invention. Note: The sequence data for this patent did not
 CC form part of the printed specification but was obtained in electronic
 CC format from USPTO at seqdata.uspto.gov/sequence.html.

CC
 CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed
 CC information from BOND.

XX

SQ Sequence 554 AA;

Query Match 54.2%; Score 1584; DB 8; Length 554;
 Best Local Similarity 56.7%; Pred. No. 7.4e-141;
 Matches 304; Conservative 67; Mismatches 155; Indels 10; Gaps 7;

Qy 3 EWWRGAVTYQVYPRSFQDSNGDGIGDLPGITARLEYLADLGVDVWLSPPFFKSPMKDMGY 62
 :||||| |:||||:||||||| || || |:| || |:|:||||||| ||
 Db 18 DWWRGAVIYQIYPRSYQDSNGDGIGDLKGIERLPYIAALGADAIWISPPFFKSPMKDFGY 77

Qy 63 DVSDYCDVDPVFGTLADFDALLARAHELGLKVIIDQVLSHSSDLHPAFVTSRSDRVNPKA 122
 |||||:||||| | || ||||:|:|:|:|:| | || | |||
 Db 78 DVSDYCDVDPMFGLADFDALTAEAHRLGLKVMIDEVLSHTADIHPWFKESRSSRSNPKA 137

Qy 123 DWYVWADPKPDGSPNNWLSVFGGSAWAWDARRKQYYLHNFLTSQPDLNYHNPKVQDWAL 182
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 Db 138 DWYVWADARPDGTPPNNWLSIFGGSAWQWDTSRQQYYLHNFLAEQPDLNFHNREVQDALL 197

Qy 183 DNMRFWLDRGVDGFRFDITVNYFFHDPLLRSN--PADHRNKPEADG-NPYGMQYHLHDKN 238
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 Db 198 DVTRFWLERGVDGFRDLDTINFYFHSQGLENNPPLPPEERNDQTAPAVNPYNYQDHLVDKS 257

Qy 239 QPENLIWMERIRVLLDQYGA-ASVGEMGESHHAIRMMGDYTAPG-RLHQCYSFEFMGYE- 295
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 Db 258 RPENLGFLERFRALLDEYPATAAVGEVGDSSQRGLEVVAAYTAGGKRVHMCYSFDFLAPEK 317

Qy 296 YTANLFRDRIESFFKGAPKGWPMWAFSNHDVVRHVSRWAKHGLTPEAVAKQTGALLLSLE 355
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 Db 318 ISAAKVRSVLEAFGKVASDGSWAFSNHDVMPASRWAAGEADPVAYLKVISALLMSLR 377

Qy 356 GSICLWEGEELGQTDTELALDELTDPOGIVFWPEPIGRDNTRTPMVWDA-SPHGGFSTVT 414
 |:|:|:|:|:| : || |:| || || ||| ||| ||||| : :|||
 Db 378 GSVCIYQGEELGLGEAELRFEDLQDPYGIWFPEFKGRDGCRTPMVWDGDAKNGGFSQAK 437

Qy 415 PWLPVKPEQAARHVAGQTGDAASVLESYRAMLAFRRAPALRTGRTRFLDLAEPVLGFVR 474
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 Db 438 PWLPVPAKHLAQAVNVQQGDQASLLEHYRRFLSFRRAPALAKGDITFIESEGDTVAFTR 497

Qy 475 GEGEGAILCLFNL--SPVARGVAVEGVGPPIGPGQQAILSGGRLGLGPNGAAFLRV 528
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 Db 498 RAGNEQVVCVFNLGAKPAKVDLGSRSIQPLPGHGFSGQARPGSIELGGYGAWFGRI 553
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